## **MEMORANDUM**

# TRAFFIC COMPARISON ASSESSMENT OF IPARK 87 TO TECH CITY EAST CAMPUS

**FROM:** Thomas Johnson, PE, PTOE

TO: Lynne Ward, George Distefano, Lauren Calabria

**CC:** Stuart Mesinger, AICP; Walter Kubow, PE; Haley Bigando

DATE: April 5, 2023 RE: iPark 87, Ulster, NY

## A. Introduction

The purpose of this assessment is to compare the trip generation and potential traffic impacts of the proposed iPark 87 project against the Transportation Findings of the previously approved Tech City East Campus project. The concept for iPark 87 is attached.

## **B.** Trip Generation

The initial phase of iPark 87 includes the construction of 880 multifamily dwelling units in multiple buildings of three to five stories. It is envisioned that the remainder of the project will consist of about 1,369,000 square feet (SF) of commercial and retail uses. At this time, this portion of the project is speculative and may consist of uses such as office, industrial, film studio, small retail, and hotel.

*Trip Generation, 11th Edition,* published by the Institute of Transportation Engineers (ITE) was used to estimate the site trips. ITE land use codes (LUC) 220 and 221 – Multifamily Housing were used for the residential portion of the project, and LUC 770 – Business Park was used for the remainder. Business Park in *Trip Generation* is defined as: a group of flex-type or incubator one- or two-story buildings served by a common roadway system. The space may include offices, retail and wholesale stores, restaurants, recreational uses and warehousing, manufacturing, light industrial, or scientific research functions.

Given the potential variety and speculative nature of the future uses of the project, Business Park is an appropriate land use to estimate trips.

The estimate of trips is shown in Table 1. The commercial portion of the project can be considered a multi-use development with trips being made between the various uses within the site and not using the external road network. Given that the Business Park definition already includes a variety of uses, these internal trips would already be included in the trip generation estimates; therefore, no additional internal trip credit was used in the estimate. However, it would be expected that internal trips would be made between the residential portion of the project and the commercial portion. Using National Cooperative Highway Research Program's (NCHRP) Report 684 Enhancing Internal Trip Capture Estimation for Mixed-Use Developments, the trip credit was calculated to be 2%, or 30 total trips. This credit is accounted for in Table 1.



Table 1: Trip Generation for the iPark 87 Project

Londillo	Ci	Land Use	PM Peak Hour						
Land Use	Size	Code	Enter	Exit	Total				
Multifamily (Low Rise)	310 units	220	97	57	154				
Multifamily (Mid Rise)	570 units	221	136	87	223				
Business Park	1,369,000 SF	770	379	1,080	1,459				
Subtotal Trips			612	1,224	1,836				
Internal Multi-use Credit (2%)			-15	-15	-30				
Total External Trips			597	1,209	1,806				

Table 2 compares the trip generation estimates for the Tech City East Campus project to that of iPark 87. The table shows that iPark 87 will generate 48 more trips in the PM peak hour than the Tech City East Campus proposal. With nine different driveways to the project site, the 48 additional trips will be spread out and can be considered a negligible increase.

Table 2: Trip Generation Comparison

Droject	PM Peak Hour								
Project	Enter	Exit	Total						
Tech City East Campus	456	1,302	1,758						
iPark 87	597	1,209	1,806						
External Trip Difference	+141	-93	+48						

## C. Roadway Traffic Volumes

Traffic volumes on Enterprise Drive and Boices Lane used for the Tech City East Campus proposal were compared to recent traffic counts collected on those roads. The recent counts were collected in 2021 and 2022 for the Ulster County Transportation Council (UCTC) and they are being used for UCTC's Route 9W corridor study. UCTC provided the counts to LaBella for use on this project. The UCTC traffic counts are attached.

Tables 3, 4, 5, and 6 show volumes that were used for the Tech City East Campus at four locations along Enterprise Drive and Boices Lane and compares them to volumes that would be used for the iPark 87 project. The volumes are 2009 and 2022 existing volumes, 5-year projected volumes, and 20-year projected volumes. It is noted that the volumes do not include trips from the Tech City East Campus or iPark 87. These are known as No-Build volumes. The 5-year and 20-year projections were estimated based on a growth rate of 1% per year. The Tech City East Campus volume figures are attached.

It is also noted that the 2022 traffic volumes were adjusted to account for the potential travel impacts associated with the COVID-19 pandemic. A comparison of counts taken in 2022 on Enterprise Drive, Boices Lane, and Route 9W near the site to pre-COVID counts taken in 2019 show that the 2022 counts were 6-8% lower than 2019 counts. Therefore, the 2022 counts were increased by 8% to reflect pre-COVID conditions. This adjustment procedure follows the guidelines developed by NYSDOT for COVID-19 travel-related impacts.



Table 3: Enterprise Drive South of Route 209 EB Ramps

Tech City East (	Campus		iPark 87			
Condition	Volume	Volume	Condition			
2009 Existing	1,115	840	2022 Existing			
5-yr Projection	1,185	885	5-yr Projection			
20-yr Projection	1,375	1,025	20-yr Projection			

Volume: 2-way (vehicles per hour)

Table 4: Enterprise Drive North of South Driveway

Tech City East (	Campus	iPark 87						
Condition	Volume	Volume	Condition					
2009 Existing	1,390	1,145	2022 Existing					
5-yr Projection	1,490	1,205	5-yr Projection					
20-yr Projection	1,725	1,400	20-yr Projection					

Volume: 2-way (vehicles per hour)

Table 5: Boices Lane West of Morton Boulevard

Tech City East (	Campus	iPark 87						
Condition	Volume	Volume	Condition					
2009 Existing	1,305	1,115	2022 Existing					
5-yr Projection	1,420	1,175	5-yr Projection					
20-yr Projection	1,640	1,360	20-yr Projection					

Volume: 2-way (vehicles per hour)

Table 6: Boices Lane Between Morton Boulevard and John Clark Road

Tech City East (	Campus	iPark 87						
Condition	Volume	Volume	Condition					
2009 Existing	1,080	985	2022 Existing					
5-yr Projection	1,185	1,035	5-yr Projection					
20-yr Projection	1,370	1,200	20-yr Projection					

Volume: 2-way (vehicles per hour)

As the tables show, the 2022 Existing volumes are 100 – 300 vehicles per hour lower than the 2009 Existing volumes from the Tech City East Campus study. The 5-year and 20-year projected volumes for iPark 87 are similarly lower than the Tech City projections.

## D. Alternative Trip Generation Estimate

Rather than grouping the entire commercial and mixed-use components of the project and classifying them as a Business Park, alternative trip estimates were calculated for each individual use with the following assumptions:

- 1. Office space is General Office space
- 2. Industrial space is Manufacturing space
- 3. Film Studio is Warehousing space
- 4. Hotel is 100 Rooms
- 5. Mobility Hub is General Office space



Table 7 presents the alternative trip generation estimates. When estimating trips for each individual component the entire project can be considered a multi-use development with trips being made between the various uses within the site and not using the external road network. Using National Cooperative Highway Research Program's (NCHRP) Report 684 *Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*, the trip credit was calculated to be 7%, or 128 total trips. This credit is accounted for in Table 7.

Table 7: Alternative Trip Generation for the iPark 87 Project

Landline	Ci	Land Use	PN	/ Peak Ho	ur
Land Use	Size	Code	Enter	Exit	Total
Multifamily (Low Rise)	310 units	220	97	57	154
Multifamily (Mid Rise)	570 units	221	136	87	223
Office	495,000 SF	710	106	520	626
Retail	32,040 SF	822	89	89	178
Hotel	100 Rooms	310	24	22	46
Film Studio	160,000 SF	160,000 SF 150 13			
Industrial	663,000 SF	140	173	386	559
Subtotal Trips			638	1,194	1,832
Internal Multi-use Credit (7%)			-64	-64	-128
Total External Trips			574	1,130	1,704

The alternative trip estimate of 1,704 total trips is less than than trip estimate from Table 1 of 1,806 total trips when grouping the commercial uses as a Business Park, and the alternative trip estimate is less than the Tech City East Campus estimate of 1,758 total trips. Therefore, use of the Business Park trip estimates is conservative.

## E. Conclusion

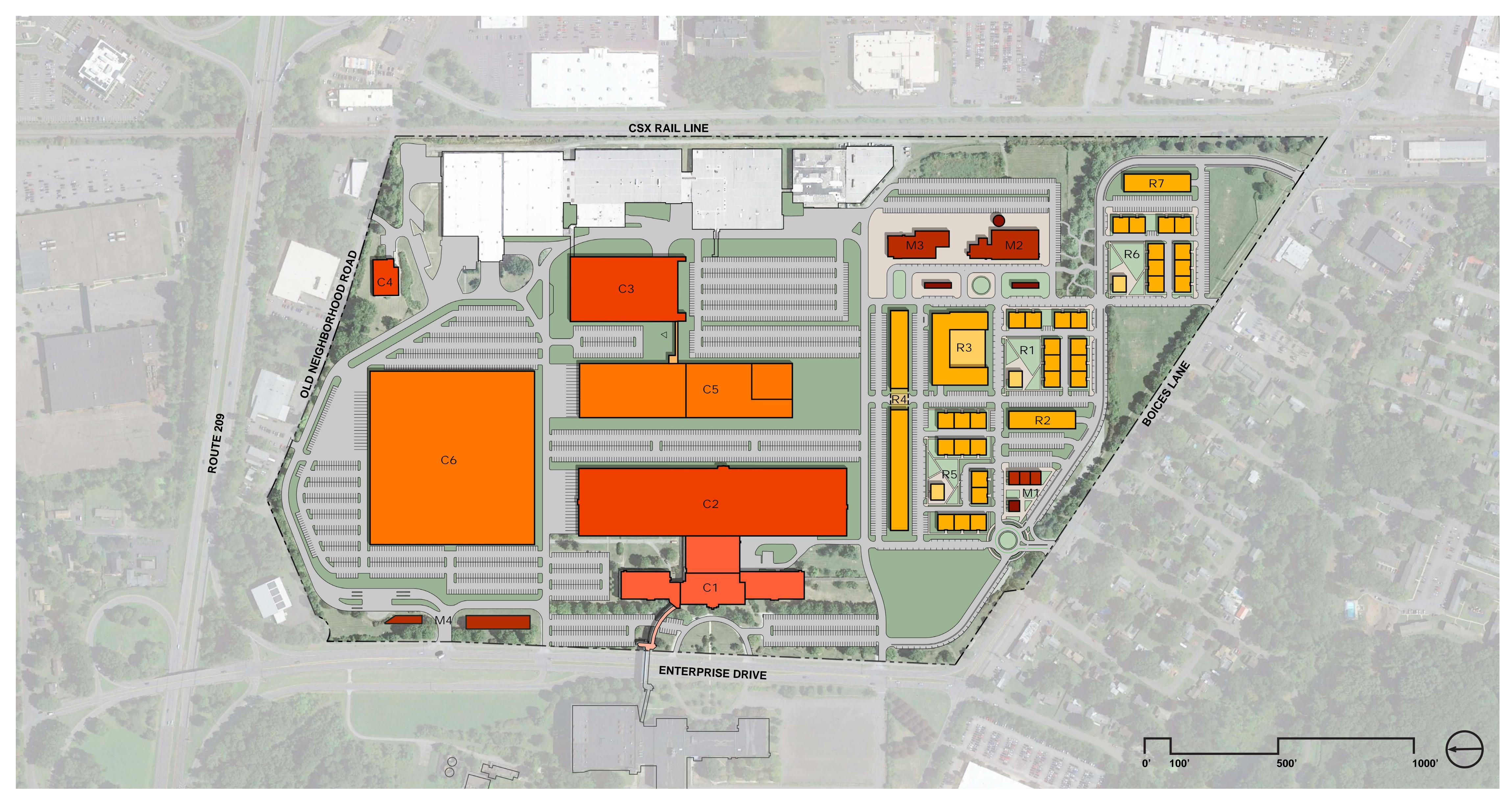
Given that the trip generation estimate for the iPark 87 proposal is similar to the estimates for the Tech City East Campus, and that the current traffic volumes and subsequent 5-year and 20-year volume projections are lower than the volumes used for the Tech City traffic analysis, it is concluded that the iPark 87 proposal will not induce additional traffic impacts that have not already been identified for the Tech City East Campus. The recommended improvements in the Findings Statement for the Tech City East Campus will be valid for the iPark 87 proposal. No further traffic analysis is needed.

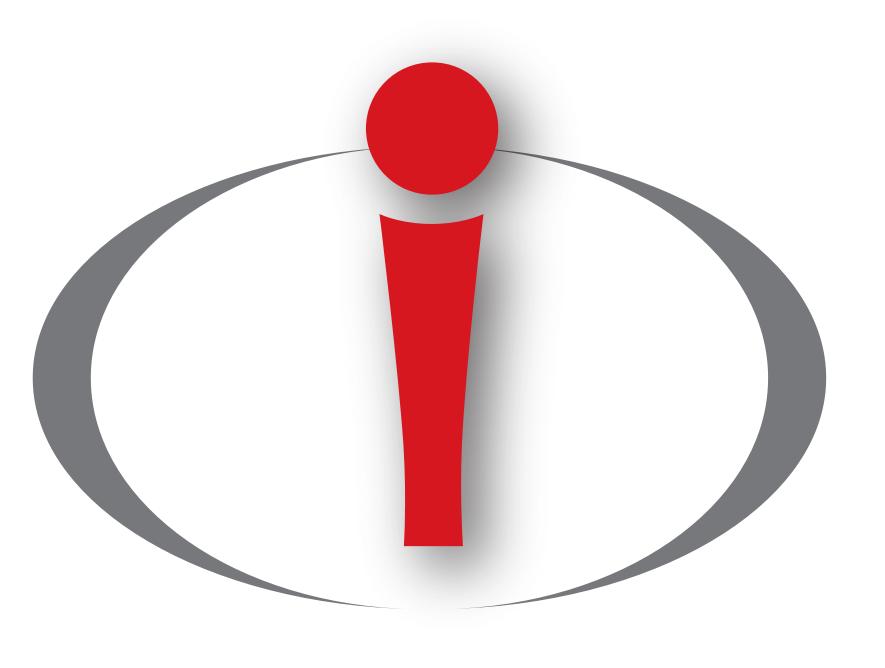
## **Attachments**

iPark 87 Concept Plan Ulster County Traffic Counts Tech City East Campus Traffic Volume Figures



iPark 87 Concept Plan





iPARK 87

**iPARK87 | EAST CAMPUS COMPREHENSIVE DESIGN PLAN** 

# NOTES:

- BUILDING SQUARE FOOTAGE (S.F.) IS MEASURED TO THE EXTERIOR OF THE BUILDING, INCLUDES MECH. CLOSETS & PARKING GARAGES, EXCLUDES BALCONIES.
- 2. PROVIDED RESIDENTIAL PARKING ASSUMES A TARGET
- RATIO OF 1.5 SPACES PER UNIT INSTEAD OF THE CURRENT CODE REQUIREMENT OF 2.5 SPACES PER UNIT.
- 3. PROVIDED MIXED-USE PARKING ASSUMES A TARGET RATIO OF 1 SPACE PER 250 SF OF GROSS FLOOR AREA. 4. NEIGHBORING PROPERTY EASEMENT - 80 PARKING SPACES APPROVED
- 5. FINAL PARKING NUMBERS TO BE REFINED BASED ON FINAL USE-TYPE AND REQUIREMENTS OF FUTURE TENANTS.
- CURRENT RESIDENTIAL BUILDINGS ASSUME GROUND FLOOR RESIDENTIAL.

TEGORY	TAG	PRIMARY USE	PHASE	STORIES	TOTAL AREA (S.F.)	COMMERCIA	AL AREA	(S.F.)	RESID	ENTIAL A	REA (S.F.	)	# UNITS		PARI	KING	
					TOTAL	COMMERCIAL	RETAIL	HOTEL	RESIDENTIAL	AMENITY	UTILITY	GARAGE		REQUIRED	PROVIDED (TOTAL)	PROVIDED (SURFACE)	PROVIDEI (GARAGE
TAL					2,326,835								880	3,661	4,257		
OMMERCIAL					1,303,000									2,136	2,680	2,680	-
	<b>C1</b>	OFFICE	PHASE 1	2	180,000	180,000								360	450	450	
	C2	INDUSTRIAL	PHASE 1	1	. 250,000	250,000								357	490	490	
	<b>C3</b>	OFFICE	PHASE 1	3	300,000	300,000								600	650	650	
	C4	INDUSTRIAL	PHASE 1	1	. 13,000	13,000								19	25	25	
	<b>C</b> 5	FILM STUDIOS	PHASE 2	1	160,000	160,000								229	265	265	
	C6	INDUSTRIAL	PHASE 2	1	400,000	400,000								571	800	800	
SIDENTIAL					957,440								880	1,320*	1,320	825	49
	R1	RESIDENTIAL	PHASE 2A	3	111,300				86,950	6,200	3,000	15,150	100	150	150	90	)
	R2	RESIDENTIAL	PHASE 2A	5	82,500				66,000	3,500	2,500	10,500	80	120	120	87	,
	R3	RESIDENTIAL	PHASE 2B	5	202,035		6,500		140,520	10,000	3,000	42,015	158	237	237	106	1
	R4	RESIDENTIAL	PHASE 2C	5	245,675				196,540	10,000	4,000	35,135	252	378	378	268	1
	R5	RESIDENTIAL	PHASE 2D	3	122,450				95,965	6,520	3,000	16,965	110	165	165	99	)
	R6	RESIDENTIAL	PHASE 2E	3	110,980				86,950	5,880	3,000	15,150	100	150	150	90	(
	<b>R7</b>	RESIDENTIAL	PHASE 2E	5	82,500				66,000	3,500	2,500	10,500	80	120	120	85	3
XED-USE					66,395									206	257	257	
	M1	RETAIL ENTRY PLAZA	PHASE 2A	1	7,600		7,600							30	38	38	
	M2	RETAIL/AMENITY	PHASE 2A	1	. 24,440		22,940				1,500			98	122	122	
	M3	HOTEL/ARTS CENTER	PHASE 2C	2	19,355			19,355						77	97	97	
	M4	MOBILITY HUB	PHASE 3	1	15,000	15,000								N/A	0	0	

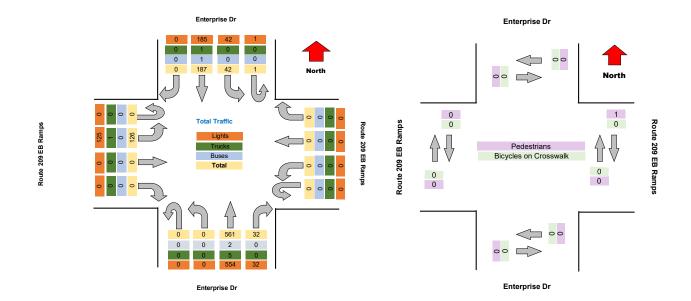
UCTC Traffic Counts

	Creighton Manning
Project Code	10651
Site Name	10651-12_Enterprise Dr & R
Legs and Movements	All Processed Legs & Moven
Bin Size	15 minutes
Survey Date	2022-10-04, Tuesday
Location	10651-12_Enterprise Dr & R
Latitude and Longitude	41.975046, -73.999362

	Start	End	PHF
AM Peak	2022/10/04 07:15:00	2022/10/04 08:15:00	0.77
PM Peak	2022/10/04 16:30:00	2022/10/04 17:30:00	0.93

## 4:30:00 PM

Leg				Enterpri	se Dr					Ro	ute 209 El	B Ramps						Enterpris	se Dr			Route 209 EB Ramps							
Direction				Southb	ound				Westbound									Northbo	und			Eastbound							,
Start Time	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Tum	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Tota	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Total
4:30:00 PM	0	54	6	0	60	0	0	0	0	0	0	0	0	0	12	152	0	0	164	0	0	0	0	31	0	31	0	0	255
4:45:00 PM	0	41	16	0	57	0	0	0	0	0	0	0	0	0	7	119	0	0	126	0	0	0	0	35	0	35	0	0	218
5:00:00 PM	0	50	8	0	58	0	0	0	0	0	0	0	0	0	9	154	0	0	163	0	0	0	0	29	0	29	0	0	250
5:15:00 PM	0	42	12	1	55	0	0	0	0	0	0	0	1	0	4	136	0	0	140	0	0	0	0	31	0	31	0	0	226
Grand Total	0	187	42	1	230	0	0	0	0	0	0	0	- 1	0	32	561	0	0	593	0	0	0	0	126	0	126	0	0	949
% Approach	0.0%	81.3%	18.3%	0.4%	0.0%	0.0%	0.0%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.0%	0.0%	0.0%	5.4%	94.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	
% Total	0.0%	19.7%	4.4%	0.1%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	59.1%	0.0%	0.0%	62.5%	0.0%	0.0%	0.0%	0.0%	13.3%	0.0%	13.3%	0.0%	0.0%	
PHF	0.000	0.866	0.656	0.250	0.958	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.911	0.000	0.000	0.904	0.000	0.000	0.000	0.000	0.900	0.000	0.900	0.000	0.000	0.930
Lights	0	185	42	1	228	0	0	0	0	0	0	0	0	0	32	554	0	0	586	0	0	0	0	125	0	125	0	0	939
% Lights	0.0%	98.9%	100.0%	100.0%	99.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	98.8%	0.0%	0.0%	98.8%	0.0%	0.0%	0.0%	0.0%	99.2%	0.0%	99.2%	0.0%	0.0%	98.9%
Trucks	0	- 1	0	0	1	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	- 1	0	1	0	0	7
% Trucks	0.0%	0.5%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.8%	0.0%	0.0%	0.7%
Buses	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	3
% Buses	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

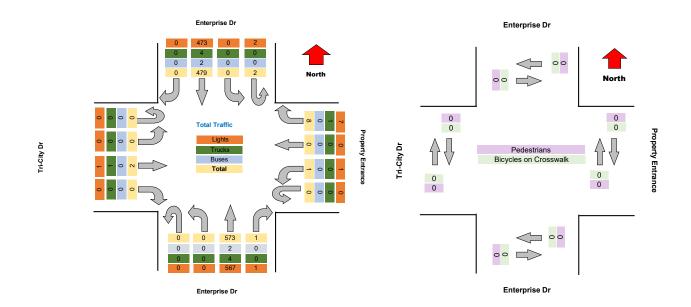


Project	Creighton Manning
Project Code	10651
Site Name	10651-11_Enterprise Dr & Tr
Legs and Movements	All Processed Legs & Moven
Bin Size	15 minutes
Survey Date	2022-10-04, Tuesday
Location	10651-11_Enterprise Dr & Tr
Latitude and Longitude	41.968608, -73.999383

	Start	End	PHF
AM Peak	2022/10/04 07:15:00	2022/10/04 08:15:00	0.79
PM Peak	2022/10/04 16:30:00	2022/10/04 17:30:00	0.87

## 4:30:00 PM

Leg				Enterpri	se Dr					Р	roperty E	ntrance						Enterpris	se Dr			Tri-City Dr									
Direction				Southb							Westbo							Northbo				Eastbound									
Start Time	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Tum	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Tota	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Tota	Peds CW	Peds CCW	Total		
4:30:00 PM	0	123	0	- 1	124	0	0	1	0	0	0	1	0	0	1	162	0	0	163	0	0	0	2	0	0	2	0	0	290		
4:45:00 PM	0	115	0	0	115	0	0	1	0	0	0	1	0	0	0	123	0	0	123	0	0	0	0	0	0	0	0	0	239		
5:00:00 PM	0	129	0	1	130	0	0	3	0	0	0	3	0	0	0	172	0	0	172	0	0	0	0	0	0	0	0	0	305		
5:15:00 PM	0	112	0	0	112	0	0	3	0	1	0	4	0	0	0	116	0	0	116	0	0	0	0	0	0	0	0	0	232		
Grand Total	0	479	0	2	481	0	0	8	0	1	0	9	0	0	1	573	0	0	574	0	0	0	2	0	0	2	0	0	1066		
% Approach	0.0%	99.6%	0.0%	0.4%	0.0%	0.0%	0.0%	88.9%	0.0%	11.1%	0.0%	0.0%	0.0%	0.0%	0.2%	99.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
% Total	0.0%	44.9%	0.0%	0.2%	45.1%	0.0%	0.0%	0.8%	0.0%	0.1%	0.0%	0.8%	0.0%	0.0%	0.1%	53.8%	0.0%	0.0%	53.8%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.2%	0.0%	0.0%			
PHF	0.000	0.928	0.000	0.500	0.925	0.000	0.000	0.667	0.000	0.250	0.000	0.563	0.000	0.000	0.250	0.833	0.000	0.000	0.834	0.000	0.000	0.000	0.250	0.000	0.000	0.250	0.000	0.000	0.874		
Lights	0	473	0	2	475	0	0	7	0	1	0	8	0	0	1	567	0	0	568	0	0	0	1	0	0	1	0	0	1052		
% Lights	0.0%	98.7%	0.0%	100.0%	98.8%	0.0%	0.0%	87.5%	0.0%	100.0%	0.0%	88.9%	0.0%	0.0%	100.0%	99.0%	0.0%	0.0%	99.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%	50.0%	0.0%	0.0%	98.7%		
Trucks	0	4	0	0	4	0	0	1	0	0	0	1	0	0	0	4	0	0	4	0	0	0	1	0	0	1	0	0	10		
% Trucks	0.0%	0.8%	0.0%	0.0%	0.8%	0.0%	0.0%	12.5%	0.0%	0.0%	0.0%	11.1%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%	50.0%	0.0%	0.0%	0.9%		
Buses	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	4		
% Buses	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%		
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		

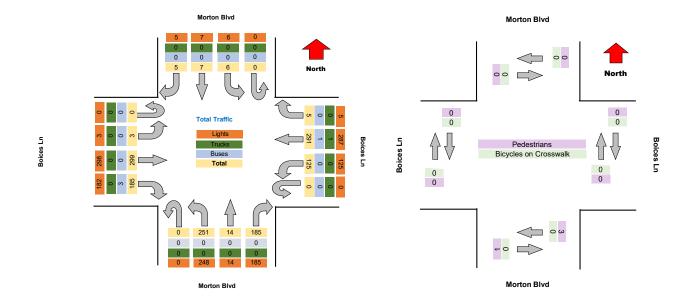


Project	Creighton Manning
Project Code	#10699
Site Name	Boices Ln & Morton Blvd
Legs and Movements	All Processed Legs & Mover
Bin Size	15 minutes
Survey Date	2022/03/08, Tuesday
Location	Boices Ln & Morton Blvd
Latitude and Longitude	41.963945, -73.992846

	Start	End	PHF
AM Peak	2022/03/08 07:30:00	2022/03/08 08:30:00	0.87
PM Peak	2022/03/08 16:15:00	2022/03/08 17:15:00	0.93

## 4:15:00 PM

1	Morton Blyd Boices Ln																Morton	Divid			Boices Ln										
Leg				Southbo							Westbo							Northbo				Eastbound									
Direction										_								1		1											
Start Time	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Tum	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Tota	Peds CW	Peds CCW	Right	Thru	Left	U-Tum	App Total	Peds CW	Peds CCW	Total		
4:15:00 PM	0	2	2	0	4	0	0	0	61	36	0	97	0	0	50	0	68	0	118	1	0	43	76	1	0	120	0	0	339		
4:30:00 PM	2	0	0	0	2	0	0	3	61	27	0	91	0	0	43	3	60	0	106	1	1	56	79	2	0	137	0	0	336		
4:45:00 PM	0	2	1	0	3	0	0	2	80	28	0	110	0	0	35	7	59	0	101	0	0	40	79	0	0	119	0	0	333		
5:00:00 PM	3	3	3	0	9	0	0	0	89	34	0	123	0	0	57	4	64	0	125	1	0	46	65	0	0	111	0	0	368		
Grand Total	5	7	6	0	18	0	0	5	291	125	0	421	0	0	185	14	251	0	450	3	1	185	299	3	0	487	0	0	1376		
% Approach	27.8%	38.9%	33.3%	0.0%	0.0%	0.0%	0.0%	1.2%	69.1%	29.7%	0.0%	0.0%	0.0%	0.0%	41.1%	3.1%	55.8%	0.0%	0.0%	0.0%	0.0%	38.0%	61.4%	0.6%	0.0%	0.0%	0.0%	0.0%			
% Total	0.4%	0.5%	0.4%	0.0%	1.3%	0.0%	0.0%	0.4%	21.1%	9.1%	0.0%	30.6%	0.0%	0.0%	13.4%	1.0%	18.2%	0.0%	32.7%	0.0%	0.0%	13.4%	21.7%	0.2%	0.0%	35.4%	0.0%	0.0%			
PHF	0.417	0.583	0.500	0.000	0.500	0.000	0.000	0.417	0.817	0.868	0.000	0.856	0.000	0.000	0.811	0.500	0.923	0.000	0.900	0.000	0.000	0.826	0.946	0.375	0.000	0.889	0.000	0.000	0.935		
Lights	5	7	6	0	18	0	0	5	287	125	0	417	0	0	185	14	248	0	447	0	0	182	298	3	0	483	0	0	1365		
% Lights	100.0%	100.0%	100.0%	0.0%	100.0%	0.0%	0.0%	100.0%	98.6%	100.0%	0.0%	99.0%	0.0%	0.0%	100.0%	100.0%	98.8%	0.0%	99.3%	0.0%	0.0%	98.4%	99.7%	100.0%	0.0%	99.2%	0.0%	0.0%	99.2%		
Trucks	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
% Trucks	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%		
Buses	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	3	0	3	0	0	3	0	0	0	3	0	0	7		
% Buses	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%		
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	- 1	0	0	0	0	0	0	- 0	0		
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		

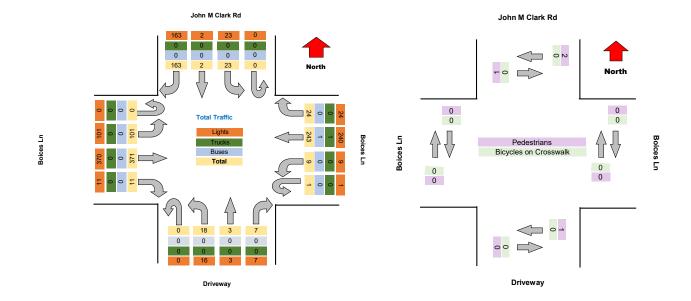


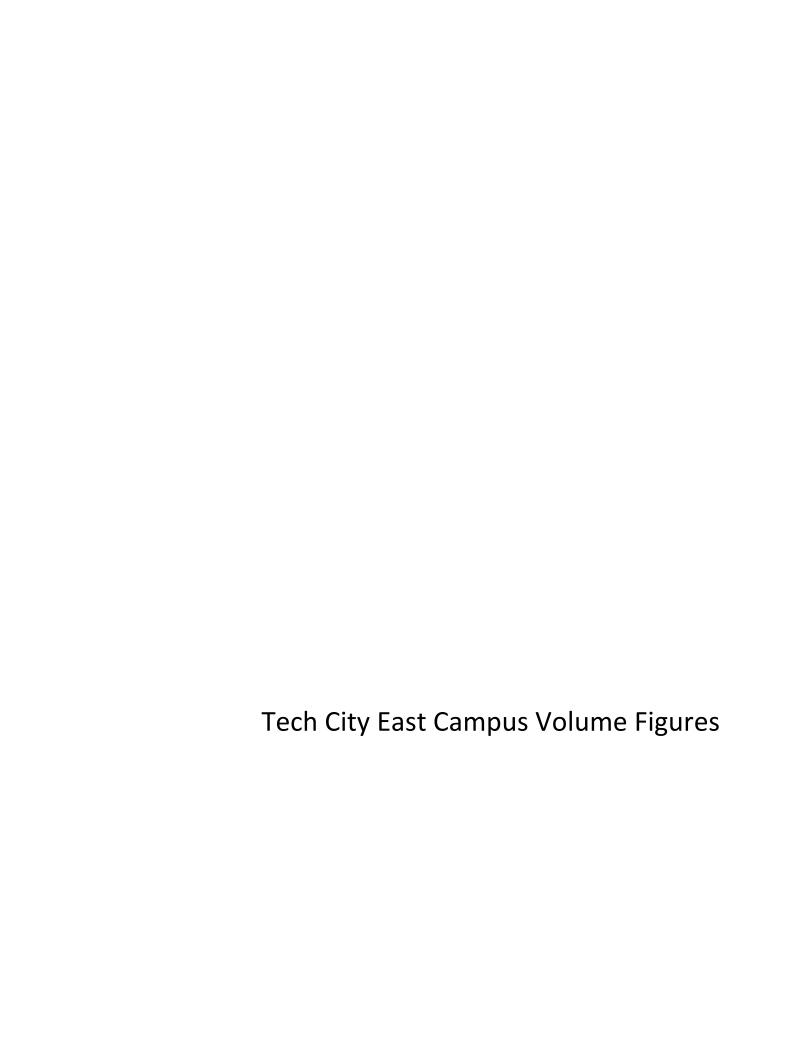
	Creighton Manning
Project Code	#10699
Site Name	Boices Ln & John M Clark Ro
Legs and Movements	All Processed Legs & Moven
Bin Size	15 minutes
Survey Date	2022/03/08, Tuesday
Location	Boices Ln & John M Clark Ro
Latitude and Longitude	41.963480, -73.991834

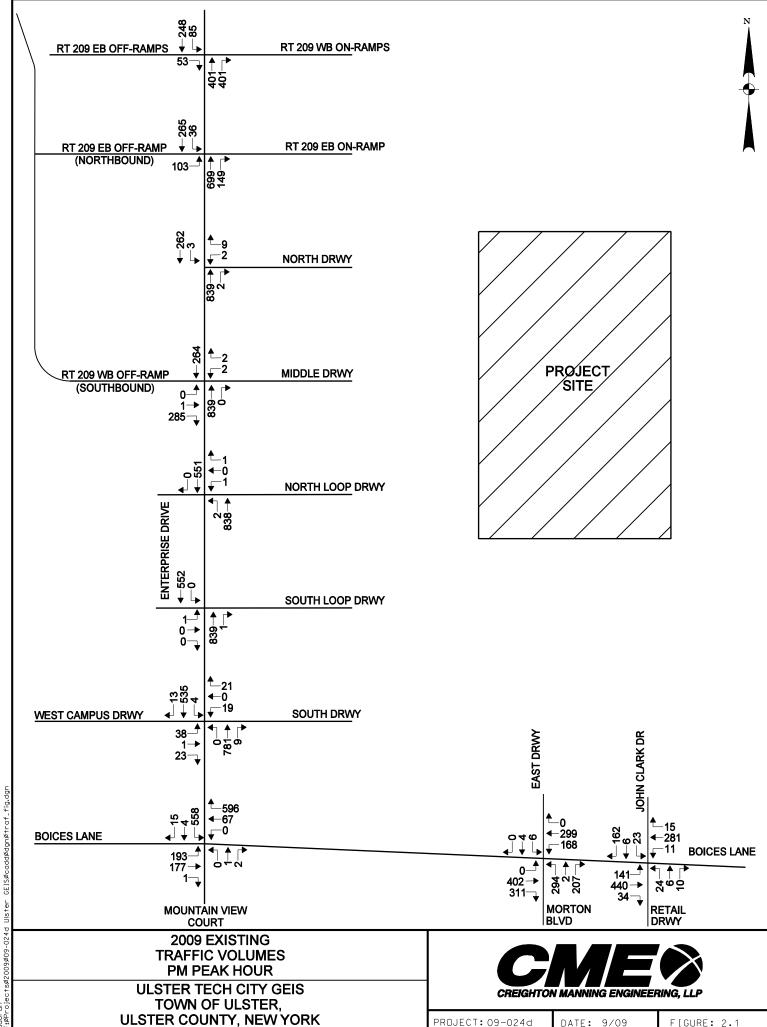
	Start	End	PHF
AM Peak	2022/03/08 07:30:00	2022/03/08 08:30:00	0.81
PM Peak	2022/03/08 16:15:00	2022/03/08 17:15:00	0.93

## 4:15:00 PM

Leg				John M C	ark Rd						Boices	Ln						Drivew	ray			Boices Ln									
Direction				Southb	ound						Westbo	und						Northbo	und			Eastbound									
Start Time	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Tum	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	App Total	Peds CW	Peds CCW	Right	Thru	Left	U-Tum	App Total	Peds CW	Peds CCW	Total		
4:15:00 PM	40	0	5	0	45	0	1	6	53	2	0	61	0	0	2	0	4	0	6	1	0	3	94	26	0	123	0	0	235		
4:30:00 PM	40	0	8	0	48	0	0	8	48	1	1	58	0	0	4	2	5	0	11	0	0	4	86	30	0	120	0	0	237		
4:45:00 PM	44	2	5	0	51	1	0	4	65	3	0	72	0	0	0	0	3	0	3	0	0	3	90	23	0	116	0	0	242		
5:00:00 PM	39	0	5	0	44	0	1	6	77	3	0	86	0	0	- 1	1	6	0	8	0	0	1	101	22	0	124	0	0	262		
Grand Total	163	2	23	0	188	1	2	24	243	9	1	277	0	0	7	3	18	0	28	1	0	- 11	371	101	0	483	0	0	976		
% Approach	86.7%	1.1%	12.2%	0.0%	0.0%	0.0%	0.0%	8.7%	87.7%	3.2%	0.4%	0.0%	0.0%	0.0%	25.0%	10.7%	64.3%	0.0%	0.0%	0.0%	0.0%	2.3%	76.8%	20.9%	0.0%	0.0%	0.0%	0.0%			
% Total	16.7%	0.2%	2.4%	0.0%	19.3%	0.0%	0.0%	2.5%	24.9%	0.9%	0.1%	28.4%	0.0%	0.0%	0.7%	0.3%	1.8%	0.0%	2.9%	0.0%	0.0%	1.1%	38.0%	10.3%	0.0%	49.5%	0.0%	0.0%			
PHF	0.926	0.250	0.719	0.000	0.922	0.000	0.000	0.750	0.789	0.750	0.250	0.805	0.000	0.000	0.438	0.375	0.750	0.000	0.636	0.000	0.000	0.688	0.918	0.842	0.000	0.974	0.000	0.000	0.931		
Lights	163	2	23	0	188	0	0	24	240	9	1	274	0	0	7	3	16	0	26	0	0	- 11	370	101	0	482	0	0	970		
% Lights	100.0%	100.0%	100.0%	0.0%	100.0%	0.0%	0.0%	100.0%	98.8%	100.0%	100.0%	98.9%	0.0%	0.0%	100.0%	100.0%	88.9%	0.0%	92.9%	0.0%	0.0%	100.0%	99.7%	100.0%	0.0%	99.8%	0.0%	0.0%	99.4%		
Trucks	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
% Trucks	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%		
Buses	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
% Buses	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%		
Pedestrians	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
% Pedestrians	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Bicycles on Crosswalk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
% Bicycles on Crosswalk	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		



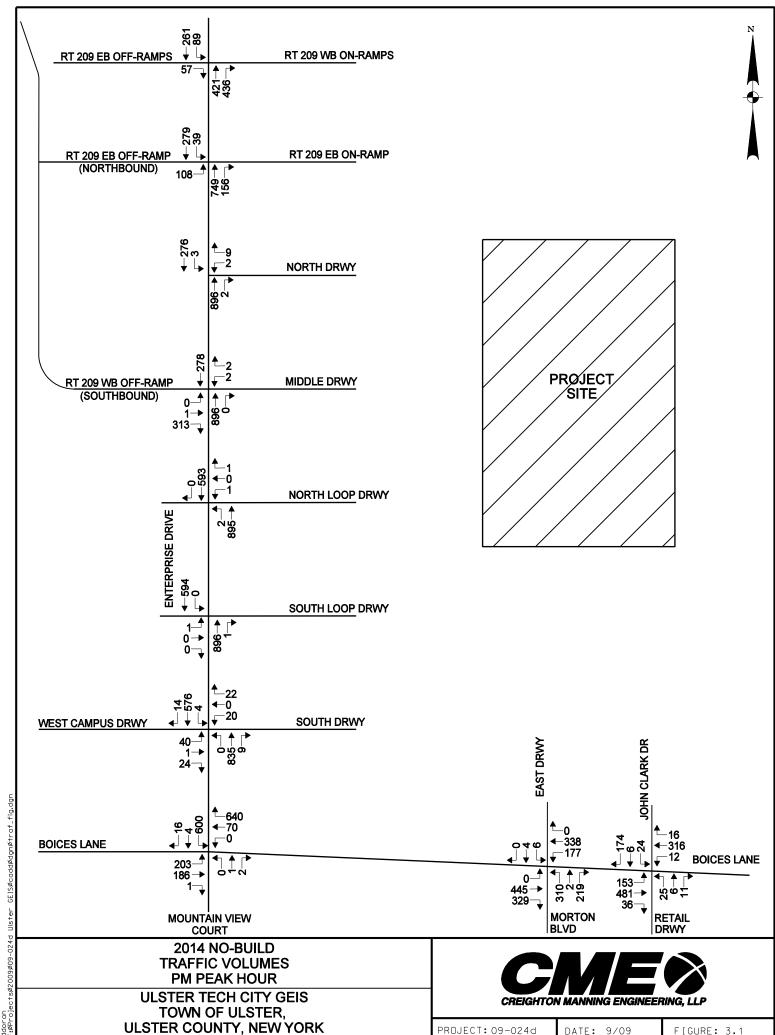




PROJECT: 09-024d

DATE: 9/09

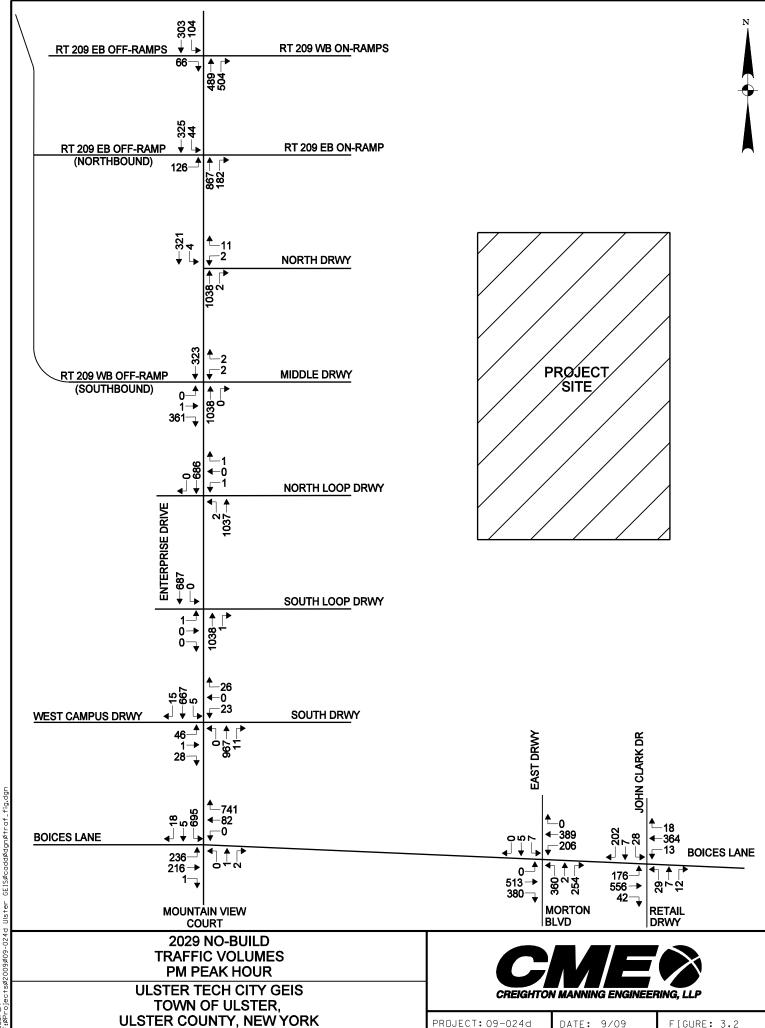
FIGURE: 2.1



PROJECT: 09-024d

DATE: 9/09

FIGURE: 3.1



PROJECT: 09-024d

DATE: 9/09

FIGURE: 3.2